WHAT IS CLAIMED IS:

1. A coating apparatus for coating with coating liquid a surface of a strip-shaped body carried in a fixed direction, the apparatus comprising:

a primary bar extending along a width direction of a carrying plane, which is a carrying path of the strip-shaped body;

a secondary bar extending in parallel with the primary bar and disposed at a downstream side of the primary bar; and

a between-bars liquid reservoir disposed between the primary bar and the secondary bar for storing the coating liquid at a time of coating of the coating liquid,

wherein coating conditions at the primary bar and the secondary bar are set so that the following condition is met,

$W_2 < W_1$

where W_1 is a coating amount of the coating liquid at the primary bar and W_2 is a coating amount of the coating liquid after the strip-shaped body has passed the secondary bar.

2. A coating apparatus according to claim 1, wherein the coating conditions of the coating liquid at the primary bar and the secondary bar are set so that the following condition is met by W_1 and W_2,

$W_2 < W_1 < 1.3 \times W_2$.

3. A coating apparatus according to claim 2, wherein the

primary bar is a wire bar formed by winding a wire around a rod, and the coating amount of the coating liquid at the primary bar is set so that the following expression

$$W_1 = 17.4365 \times r(2.167\eta + 0.289K)/L$$

is met by W_1, a diameter r (mm) of the wire, a number of rotations K (rpm) of the primary bar, viscosity η (cps) of the coating liquid, and a carrying speed L (m/min).

4. A coating apparatus according to claim 1, further comprising an air-liquid interface forming portion for forming an air-liquid interface, which is an interface between the coating liquid and air, at the between-bars liquid reservoir at a time of coating.

5. A coating apparatus according to claim 4, wherein the air-liquid interface forming portion includes a coating liquid sucking out portion for sucking out the coating liquid stored in the between-bars liquid reservoir.

6. A coating apparatus according to claim 5, wherein a primary coating liquid supply flow path for supplying the coating liquid is formed at an upstream side of the primary bar, and

the coating liquid sucking out portion is a communicating flow path for allowing communication between the between-bars liquid reservoir and the primary coating liquid supply flow path.

7. A coating apparatus according to claim 1, wherein the

strip-shaped body is a support web for forming a base material of a planographic printing plate precursor, and the coating liquid is a plate-making layer forming liquid for forming a plate-making layer of the planographic printing plate precursor.

8. A coating method for coating with coating liquid a surface of a strip-shaped body carried in a fixed direction, the method comprising:

coating the surface of the strip-shaped body with the coating liquid at a primary bar, the primary bar extending along a width direction of a carrying plane, which is a carrying path of the strip-shaped body;

storing the coating liquid in a between-bars liquid reservoir that is disposed at a downstream side of the primary bar and located between the primary bar and a secondary bar, the secondary bar extending in parallel with the primary bar; and

regulating a coating amount of the coating liquid at the secondary bar,

wherein coating conditions at the primary bar and the secondary bar are set so that the following condition is met,

$W_2 < W_1$

where W_1 is a coating amount of the coating liquid at the primary bar and W_2 is a coating amount of the coating liquid after the strip-shaped body has passed the secondary bar.

9. A coating apparatus for coating with coating liquid a surface of a strip-shaped body carried in a fixed direction, the apparatus comprising:

a primary bar extending along a width direction of a carrying plane, which is a carrying path of the strip-shaped body; and

a secondary bar extending in parallel with the primary bar at a downstream side of the primary bar,

wherein the secondary bar is formed so as to contact the strip-shaped body before the primary bar at a time of starting coating of the coating liquid.

10. A coating apparatus according to claim 9, wherein the primary bar and the secondary bar approach the strip-shaped body from standby positions separated from the carrying plane at the same approaching speed V_c at the time of starting coating, and

wherein a distance a from the primary bar to the carrying plane is longer than a distance b from the secondary bar to the carrying plane in the standby positions.

11. A coating apparatus according to claim 10, wherein the primary bar and the secondary bar move toward the strip-shaped body from the standby positions at the approaching speed V_c such that the relational expression

$$c/V_c \leq d/V_w$$

is met by a distance difference c, an approaching speed V_c, a carrying speed V_w, and a distance d at the time of starting

coating, where V_w is the carrying speed of the strip-shaped body, d is a center distance, which is a distance between the center axes of the primary bar and the secondary bar, and c is a difference between the distance a and the distance b.

12. A coating apparatus according to claim 9, further comprising:

a primary support roller disposed at an upstream side of the primary bar relative to the carrying direction of the strip-shaped body for pressing the strip-shaped body against the primary bar at a time of coating of the coating liquid; and

a secondary support roller disposed at the downstream side of the secondary bar relative to the carrying direction of the strip-shaped body for pressing the strip-shaped body against the secondary bar at the time of coating,

wherein, in standby positions separated from the carrying plane, the primary support roller and the secondary support roller are located in positions where a distance b from the secondary bar to the carrying plane is smaller than a distance a from the primary bar to the carrying plane, and move toward pressing positions where the strip-shaped body is pressed against the primary bar and the secondary bar at the same speed at the time of starting coating.

13. A coating apparatus according to claim 9, further comprising:

a primary support roller disposed at an upstream side of

the primary bar relative to the carrying direction of the strip-shaped body for pressing the strip-shaped body against the primary bar at a time of coating of the coating liquid; and

a secondary support roller disposed at the downstream side of the secondary bar relative to the carrying direction of the strip-shaped body for pressing the strip-shaped body against the secondary bar at the time of coating,

wherein the secondary support roller presses the strip-shaped body against the secondary bar at the time of starting coating of the coating liquid, and

the primary support roller presses the strip-shaped body against the primary bar and brings the strip-shaped body into contact with the primary bar after the strip-shaped body contacts the secondary bar.

14. A coating apparatus according to claim 13, wherein the primary bar and the secondary bar are provided with their heights fixed.

15. A coating apparatus according to claim 9, further comprising:

a primary support roller disposed at an upstream side of the primary bar relative to the carrying direction of the strip-shaped body for pressing the strip-shaped body against the primary bar at a time of coating of the coating liquid; and

a secondary support roller disposed at the downstream side of the secondary bar relative to the carrying direction

of the strip-shaped body for pressing the strip-shaped body against the secondary bar at the time of coating,

wherein the secondary support roller is provided in a lower position than the primary support roller, in standby positions separated from the carrying plane.

16. A coating apparatus according to claim 15, wherein the primary support roller and the secondary support roller are provided with their heights fixed.

17. A coating apparatus according to claim 15, wherein the primary bar and the secondary bar move toward the strip-shaped body from the standby positions at an approaching speed V_c so that the relational expression

$$c'/V_c < d/V_w$$

$$(c' = g \times d/L + c)$$

is met at the time of starting coating, where V_w is the carrying speed of the strip-shaped body, d is a center distance, which is a distance between the center axes of the primary bar and the secondary bar, c is a difference between a distance a and a distance b, the distance a is a distance from the primary bar to the carrying plane, the distance b is a distance from the secondary bar to the carrying plane, a center distance of the primary support roller and the secondary support roller is L, and a difference between a height of the primary support roller and a height of the secondary support roller is g.

18. A coating apparatus according to claim 9, wherein a

between-bars liquid reservoir is provided between the primary bar and the secondary bar for storing the coating liquid therein at a time of coating of the coating liquid.

19. A coating apparatus according to claim 9, wherein the strip-shaped body is a support web for forming a base material of a planographic printing plate precursor, and the coating liquid is a plate-making layer forming liquid for forming a plate-making layer on the surface of the support web.

20. A coating method for coating with coating liquid a surface of a strip-shaped body carried in a fixed direction, the method comprising:

bringing a secondary bar into contact with the strip-shaped body at a time of starting the coating of the coating liquid, the secondary bar extending along a width direction of a carrying plane, which is a carrying path of the strip-shaped body; and

bringing a primary bar into contact with the strip-shaped body, the primary bar extending in parallel with the secondary bar on an upstream side of the secondary bar.